Guidance for the Calculator-Prohibited Portion of TNReady

Background

- In all grade levels, the first subpart of TNReady for mathematics does not allow the use of a calculator.
- There is not a list outlining every standard that is assessed on the calculator-prohibited portion of the exam because many standards can be assessed with or without a calculator.
- The purpose of this document is to provide general guidance and examples of how standards can be assessed on both the calculator-prohibited and calculator-permitted portions of TNReady.
- This document is divided into two grade bands (grades 3-5 and grades 6-11) because there is a general shift from basic computation (grades 3-5) to application of computational skills (grades 6-11). There is an exception to this in grade 7 where students learn computation of mixed integers. However, for this purpose of this document, we split the grade bands based on the overall transition from computation to application.

<table>
<tr><th colspan="4">3-5 Grade Band</th></tr>
<tr><td>General Guidance</td><td colspan="3">

The 3-5 grade band is centered on grade-appropriate computational problems.
For example, in grade 5, students may be asked to solve $\frac{1}{2}+\frac{3}{4}$
The no-calculation portion of the TNReady assessment may assess standards that do not require calculation.

Geometry: Identify shapes
Operations and Algebraic Thinking: Demonstrate an understanding of properties
Place Value: When given a number in expanded form, express it in standard form

Fluency is not tied to speed. Fluency is only a small percentage of the items assessed without a calculator, and fluency standards requiring unspecified, multi-digit computation will be assessed within reasonable limits.

</td></tr>
<tr><td>Examples
The following examples show how the same standard could be assessed on the calculator and the calculator-prohibited portions of TNReady.</td>
<td><u>3rd Grade (3.NBT.A.1)</u>

No Calculator
Equation Editor (student inputs answer)
What is 784 rounded to the nearest 100?

Calculator
Equation Editor (student inputs answer)
Gretchen has a jar of pennies. She rounds the total amount of pennies to the nearest 10 and gets 120. Give 3 different amounts of pennies that could be in the jar.</td>
<td><u>4th Grade (4.NF.C.5)</u>

No Calculator
Multiple Choice
Which of the following is equivalent to $\frac{30}{100}$?

Calculator
Multiple Choice
What number will make the equation true?
$\frac{6}{10}=\frac{?}{100}$</td>
<td><u>5th Grade (5.NF.B.4a)</u>

No Calculator
Multiple Choice
Which of the following is equivalent to the expression $\frac{3}{4}\times\frac{2}{5}$?

Calculator
Multiple Choice
What number belongs in the box?
$\frac{1}{2}\times[\quad]=14$</td></tr>
</table>

6-11 Grade Band

General Guidance

- In the 6-11 grade band, there is less emphasis on pure computational skills and a greater emphasis on a student's application of computational skills. Generally, the questions on the calculator-prohibited portion will include friendlier numbers.
    - Examples include: Greatest Common Factor, Scale-Factor, Ratios, Pythagorean Theorem, Trigonometric Ratios, and Probability
- The exception to the first points is in grade 7 where students learn computational skills for mixed integers.
    - For example, in grade 7, students may be asked to simplify the following expression: -3 + 5 – 8
- The calculator-prohibited portion of the TNReady assessment may assess standards that require little to no calculation and are more conceptual in nature.
    - Examples include: simplifying expressions; solving equations; identifying three-dimensional shapes from nets; ordering integers; identifying rational/irrational numbers; writing a system of equations to represent a situation; representing numbers on a number line; graphing equations given in "friendly form;" solving formulas for different variables; interpreting the meaning of parts of an equation; identifying domain; dividing polynomials; graphing translations, rotations, reflections, dilations; and identifying cross-sectional shapes in three-dimensional shapes.

Examples

The following examples show how the same standard could be assessed on the calculator and the calculator-prohibited portions of TNReady.

7th Grade (7.EE.B.3)

No Calculator

Multiple Choice

Rose View Elementary School is purchasing 9 new Chrome Books for $329.95 each. Which amount is the best estimate of the total cost of the Chrome Books?

Calculator

Equation Editor (student inputs answer)

Tamela earns $8.00 for her first hour of work and $8.65 every hour after. How much will she earn for a 12 hour shift?

Algebra I /Integrated Math I (A-REI.C.5)

No Calculator

Multiple Choice

A system of equations is shown.

$$3x + 2y = 1$$
$$-2y - x = -3$$

Which system has the same solution as the first system?

Calculator

Equation Editor (student inputs answer)

$$2x - y = -4$$
$$x - y = -1$$

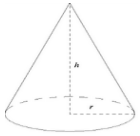
Create another system of equations with the same solution. The equations for the new system should both be different from the two equations given.

Integrated Math II/Geometry (G-GMD.A.3)

No Calculator

Equation Editor (student inputs answer)

A cone is shown.



Caleb is using the cone to scoop bird seed into a cylindrical bird feeder that has a height h and a base with a radius r. How many times will he use the cone to fill the cylindrical container with bird seed?

Calculator

Equation Editor (student inputs answer)

A square pyramid is placed on top of a box. Calculate the volume of the new shape. Round your answer to the nearest hundredth.